

Work Order ID 59196

Friday, May 28, 2010 9:16:22 AM



Page 1

Item ID: D6101-003

Accept



Setup Start



Revision ID:

Item Name: Saddle Billet, 7075

Stop



Start Date: 5/27/2010 Start Qty: 40.00



Cust Item ID:

Required Date: 6/4/2010 Req'd Qty: 40.00



Customer:

Reference:

Approvals:

Process Plan:

M

Date: 10-5-28

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D6101

Rev B

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O:

8393 12019

a) Description: Alluminum billet

b) 7.875" x 6.250" x 2.00" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 7.875" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

CL 10/5/28 40

110

0.00



Receive & Inspect for Damage & Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

P0106/11 (40)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Date:

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Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



QC6- Inspect dimensions to drawing

0.00

QC

Memo

0.00

Quality Control

Ensure Material certification comply to Dwg D6101

SL 10/06/14

130



Identify as per dwg & Stock Location: MAT 42 0.00

Packaging

Memo

0.00

Packaging

SL 10/06/14



140



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

10/06/15

CZ 10/06/14

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NOTE: Date & initial all entries

Picklist Print

Friday, May 28, 2010 9:16:26 AM

Page 1

Work Order ID: 59196



Parent Item: D6101-003



Parent Item Name: Saddle Billet, 7075


Start Date: 5/27/2010

Required Date: 6/4/2010

Comments: IPP A: ☐01.05.04 ☐New Issue ☐EC

Start Qty: 40.00

Required Qty: 40.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003P  7075-T7351 2X6.25X7.875		Purchased	No			110	Each	0.0000	1	40			



PIO 10/4/11 60

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

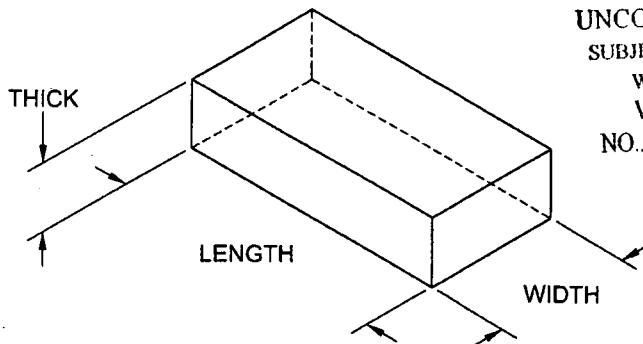
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING

SHIPPING
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 59196
PS 10-5-28



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	<small>COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO12019

Purchase Order Date 6/03/10

PO Print Date 6/07/10

Page Number 1 of 1

Order From :

VC-MET001

METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name
Vendor Phone 514 694 9575
Vendor Fax 514 695 3281
Vendor Account Nbr

Buyer Chantal Lavoie
Requisition Nbr
Tax Resale Nbr 10127-2607
Terms Net 30
Currency CAD
FOB

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D6101-001P	7075-T7351 2X6X6.25	6/03/10 Yes	60.00 Each		\$45.1000	\$2,706.00
2	D6101-003P Release 40	7075-T7351 2X6.25X7.875	6/03/10 Yes	110.00 Each	MAC 40	\$59.1600	\$6,507.60
3	D6101-005P	7075-T7351 8.25X5.0X2.5	6/03/10 Yes	75.00 Each		\$61.0000	\$4,575.00
4	D6101-013P	Saddle billet	6/03/10 Yes	20.00 Each		\$125.0000	\$2,500.00
5	D6102-013P	6061-T6 7.0x6.5x2.0	6/03/10 Yes	20.00 Each		\$32.0000	\$640.00

PO Total: \$16,928.60

MATERIAL CERTIFICATION
REQD UPON DELIVERY

PO Instructions: REF: P/O 8393

Change Nbr: 2

Change Date: 6/07/10

cx
w
No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:370390

Ship From: Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 10-JUN-10	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 370390-2	

Shipment Details	Final Destination Branch - MON
-------------------------	---------------------------------------

Order No 787514	Line No 1	Item No 6857.MO	Description 2.0000.PL.7075.T7351.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 8.875")) X 7.875 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 8.875")) - ALUMINUM PLATE SAW				
Purchase Order No 8393 12019		Part Number YOUR ITEM NUMBER: D6101-003		Ordered Qty 40 PCS		Invoice Qty 40 PCS	
Details							
Delivery No. 29413305	Mill	Heat Number 456750A9	Mech Id	PCS 40	Width (IN)	Length (IN)	Shipped Qty (LBS) 406.43

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were exported thereunder. Diversion contrary to US Law is Prohibited.							
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.							
Reviewed by Authorized Castle Metals Representative:				Date:			

Rec'd 6/11

SHIP TO: A M CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 80131
SOLD TO: AM CASTLE & CO- SOLD TO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
 Phone: (800) 387-2586

CERTIFIED TEST REPORT

Serial Number
 4149447

CUSTOMER PO NUMBER: 01-15905		WORK PACKAGE:		CUSTOMER PART NUMBER: 6857 A97075-60		SHIP RUN/LOAD ID: 101432/18		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1075544	LINE ITEM: 1	SHIP DATE: 11-DEC-2008	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE			
WEIGHT SHIPPED: 5732 LB	QUANTITY: 4 PCS EST.	B/L NUMBER: 2020668	GUAGE: 2.0000 IN	WIDTH: 48.500 IN	LENGTH: 144.500 IN				

Certified Specifications

AMS 4078/RevG
 ASTM B 209/Rev07
 BSS 7055/RevA
 DPS 4.713/RevAH
 G8816100/RevG/Amd1

AMS-QQ-A-250/12
 ASTM B 594/Rev06
 CMMP 025/RevR
 EAC MS1011/RevE
 MMS 159/RevN

AMS-STD-2154
 BAC 5439/RevH
 CSTI 008/RevC
 GAMP8 9101/RevB
 PS 21211/RevK

Test Code: 4297

Test Results

Lot: 456514A8 Cast 198

Drop 21

Ingot 1

(ASTM E8/8557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	73.2 : 73.8 (808 : 809)	63.6 : 84.9 (439 : 447)	11.6 : 11.8

(ASTM E1004)

Conductivity %IACS :	41.2 Min	41.7 Max
(MS/M) :	23.9 Min	24.2 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.21	1.6	0.03	2.4	0.19	5.7	0.03	0.01	0.01	TOT 0.05

**KAISER
ALUMINUM**Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number
4149447

Lot: 456750A9 Cast 198 Drop 20 Ingot 1

(ASTM E8/B667)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	73.1 : 73.7 (504 : 508)	62.7 : 63.4 (432 : 437)	11.9 : 12.1

(ASTM E1004)

Conductivity %IACS :	41.8 Min	42.2 Max
(MS/M) :	24.2 Min	24.5 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.22	1.4	0.02	2.4	0.20	5.7	0.03	0.01	0.01	TOT 0.06

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.06
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

7075-T7351 plate 3.001-3.500" thick, if ultrasonically inspected, meets requirements of CMMPO25 per SDR CMMPO25-KaiserT-1. 7075-T7351 plate 3.501-5.000" thick, if ultrasonically inspected, meets requirements of CMMPO25 per SDR CMMPO25-KaiserT-2.

Metal represented by this test report was immersion ultrasonically tested from one side and meets the Class A and Class B requirements of all specifications referenced on this test report.

CASTLE METALS CORP.
DATE RCVD 12/16/08
IAC [Signature]
APPROVED BY [Signature]

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DEARS 225.872-100, WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DEARS 252.228 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR FORGERIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. 180-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

Bill Poy